APPENDIX A

EXCEPTIONAL EVENT INITIAL NOTIFICATION

EE Initial Notification Summary Information

Submitting Agency: Clark County Department of Environment and Sustainability
Agency Contact: Mike Sword, Planning Manager
Date Submitted: November 30, 2020
Applicable NAAQS: 2015 8-hour Ozone
Affected Regulatory Decision[1]: Attainment status
Area Name/Designation Status: Las Vegas Valley Nonattainment Area
Design Value Period: 2018-2020

A) Information specific to each flagged site day that may be submitted to EPA in support of the affected regulatory decision listed above

Date of Event	Type of Event	AQS Flag	Site AQS ID	Site Name	Exceedance Concentration (ppb)	Notes (e.g., event name, links to other events)
06/19/2018	Wildfire	RT	32-003-0298	Green Valley	77	Transport of smoke from the Planada Fire (CA) and Upper Colony Fire (NV) to Clark County. Green Valley and Jerome Mack recorded fourth highest 8-hour average O3 in 2018.
		RT	32-003-0043	Paul Meyer	72	
		RT	32-003-0071	Walter Johnson	72	
06/20/2018	Wildfire	RT	32-003-0075	Joe Neal	72	This exceedance correlated with the June 19 event and was impacted by the Planada Fire (CA) and Upper Colony Fire (NV).
		RT	32-003-0043	Paul Meyer	71	
		RT	32-003-0071	Walter Johnson	74	
06/23/2018	Wildfire	RT	32-003-0298	Green Valley	75	Transport of smoke from the Jack Knife Fire (OR), Boxcar Fire (OR), Graham Fire (OR), Lions Fire (CA), and some additional fires in northern California. Walter Johnson recorded the fourth highest 8-hour average O3 in 2018.
		RT	32-003-0075	Joe Neal	72	
		RT	32-003-0043	Paul Meyer	72	
		RT	32-003-0071	Walter Johnson	76	
06/27/2018	Wildfire	RT	32-003-0298	Green Valley	78	Transport of smoke from the Lions Fire, Pawnee Fire, and Lane Fire in California, and some ongoing large fires in Oregon and Mexico. Green Valley recorded the highest 8-hour average O3 in 2018.
		RT	32-003-0075	Joe Neal	72	
		RT	32-003-0043	Paul Meyer	75	
		RT	32-003-0071	Walter Johnson	76	
07/14/2018	Wildfire	RT	32-003-0298	Green Valley	78	Transport of smoke from the Ferguson Fire (CA), Georges Fire (CA), Valley Fire (CA), Mohave Fire (CA), Mexico fires, and West Valley Fire (UT). Green Valley recorded the third highest 8-hour average O3 in 2018.
		RT	32-003-0043	Paul Meyer	72	

Date of Event	Type of Event	AQS Flag	Site AQS ID	Site Name	Exceedance Concentration (ppb)	Notes (e.g., event name, links to other events)
07/15/2018	Wildfire	RT	32-003-0298	Green Valley	73	This exceedance correlated with the July 14 event. Joe Neal recorded the second highest 8-hour average O3 in 2018.
		RT	32-003-0075	Joe Neal	78	
		RT	32-003-0071	Walter Johnson	71	
07/16/2018	Wildfire	RT	32-003-0298	Green Valley	71	This exceedance correlated with the July 14 event. Walter Johnson recorded the highest 8-hour average O3 in 2018.
		RT	32-003-0075	Joe Neal	80	
		RT	32-003-0043	Paul Meyer	75	
		RT	32-003-0071	Walter Johnson	79	
07/17/2018	Wildfire	RT	32-003-0043	Paul Meyer	74	This exceedance correlated with the July 14 event. Walter Johnson recorded the third highest 8-hour average O3 in 2018.
		RT	32-003-0071	Walter Johnson	77	
07/25/2018	Wildfire	RT	32-003-0298	Green Valley	72	Regional smoke created by the Ferguson Fire, Georges Fire, Lions Fire, and Cranston Fire in California, and additional fires in Mexico.
		RT	32-003-0043	Paul Meyer	71	
		RT	32-003-0071	Walter Johnson	72	
07/26/2018	Wildfire	RT	32-003-0298	Green Valley	77	This exceedance correlated with the July 25 event.
		RT	32-003-0043	Paul Meyer	72	
		RT	32-003-0071	Walter Johnson	75	
07/27/2018	Wildfire	RT	32-003-0075	Joe Neal	76	This exceedance correlated with the July 25 event. Joe Neal recorded the fourth highest 8-hour average O3 in 2018.
		RT	32-003-0043	Paul Meyer	72	
		RT	32-003-0071	Walter Johnson	74	
07/30/2018	Wildfire	RT	32-003-0298	Green Valley	73	Regional smoke created by the Carr Fire, Mendocino Complex Fire, Whaleback Fire, Ferguson Fire, Lions Fire, Georges Fire, and Cranston Fire in California.
07/31/2018	Wildfire	RT	32-003-0075	Joe Neal	73	This exceedance correlated with the July 30 event.
		RT	32-003-0071	Walter Johnson	73	
08/06/2018	Wildfire	RT	32-003-0298	Green Valley	74	Regional smoke created by the ongoing Carr Fire, Mendocino Complex Fire, Ferguson Fire, Lions Fire and an additional new
		RT	32-003-0075	Joe Neal	76	

Date of Event	Type of Event	AQS Flag	Site AQS ID	Site Name	Exceedance Concentration (ppb)	Notes (e.g., event name, links to other events)
		RT	32-003-0043	Paul Meyer	79	fire, Donnell. Paul Meyer and Walter Johnson recorded the first and second highest 8-hour average O3 in 2018, respectively.
		RT	32-003-0071	Walter Johnson	77	
08/07/2018	Wildfire	RT	32-003-0298	Green Valley	72	This exceedance correlated with the August 6 event.
		RT	32-003-0075	Joe Neal	74	
		RT	32-003-0043	Paul Meyer	73	
		RT	32-003-0071	Walter Johnson	74	
05/06/2020	Stratospheric Intrusion	RO	32-003-0298	Green Valley	72	An upper-level, ozone-rich air mass was observed to the west of Clark County in the days leading up to this event. Descending transport was observed between the upper-level air mass and monitoring sites in Clark County.
		RO	32-003-0075	Joe Neal	76	
		RO	32-003-0043	Paul Meyer	77	
		RO	32-003-0071	Walter Johnson	78	
05/09/2020	Stratospheric Intrusion	RT	32-003-0043	Paul Meyer	74	An upper-level, ozone-rich air mass was observed to the southwest of Clark County in the days leading up to this event. Transport was observed between the upper-level air mass and monitoring sites in Clark County.
		RT	32-003-0071	Walter Johnson	71	
05/28/2020	Stratospheric Intrusion	RO	32-003-0043	Paul Meyer	76	An upper-level, ozone-rich air mass was observed over Clark County and to the south of Clark County in the days leading up to and on the day of this event. A large mixing layer and descending transport were observed from the upper-level air mass to monitoring sites in Clark County.
		RO	32-003-0071	Walter Johnson	71	
06/22/2020	Wildfire	RT	32-003-0075	Joe Neal	78	The Ivanpah Fire was observed in the Mojave National Preserve on the day of this event, with a smoke plume intersecting Clark County. Other regional fires that are likely to have been influential during this event: Grade Fire (CA), Magnum Fire (AZ), Bush Fire (AZ), and Bighorn Fire (AZ).
		RT	32-003-0043	Paul Meyer	74	
		RT	32-003-0071	Walter Johnson	73	
06/26/2020	Wildfire	RT	32-003-0043	Paul Meyer	73	Transport from the Rock Path Fire (UT), Twin Fire (NV), and Miller Fire (NV) were seen during this event. The Thermal Mulch Fire (CA) may also have played a role.
08/03/2020	Wildfire	RT	32-003-0298	Green Valley	72	Direct transport of smoke from the Apple Fire in southern California was seen during this event.
		RT	32-003-0075	Joe Neal	81	

Date of Event	Type of Event	AQS Flag	Site AQS ID	Site Name	Exceedance Concentration (ppb)	Notes (e.g., event name, links to other events)
		RT	32-003-0043	Paul Meyer	78	
		RT	32-003-0071	Walter Johnson	82	
08/07/2020	Wildfire	RT	32-003-0075	Joe Neal	72	Direct transport of smoke from the Apple Fire in southern California was seen during this event.
		RT	32-003-0071	Walter Johnson	71	
8/18/2020	Wildfire	RT	32-003-0075	Joe Neal	78	Regional smoke created by large fire complexes in CA influenced the 8/18–8/21/2020 events in Clark County: Red Salmon Complex, August Complex, LNU Lightning Complex, SCU Lightning Complex, CZU Lightning Complex, Lake Fire, River Fire, Carmel Fire, North Range Fire, and Dome Fire. Other possible fires affecting regional smoke include: Cold Springs Fire, North Complex, Loyalton Fire, and Dolan Fire (all in CA).
		RT	32-003-0043	Paul Meyer	79	
		RT	32-003-0071	Walter Johnson	82	
08/19/2020	Wildfire	RT	32-003-0298	Green Valley	71	Regional smoke created by large fire complexes in CA influenced the 8/18–8/21/2020 events in Clark County: Red Salmon Complex, August Complex, LNU Lightning Complex, SCU Lightning Complex, CZU Lightning Complex, Lake Fire, River Fire, Carmel Fire, North Range Fire, and Dome Fire. Other possible fires affecting regional smoke include: Cold Springs Fire, North Complex, Loyalton Fire, and Dolan Fire (all in CA).
		RT	32-003-0075	Joe Neal	73	
		RT	32-003-0043	Paul Meyer	74	
		RT	32-003-0071	Walter Johnson	74	
08/20/2020	Wildfire	RT	32-003-0075	Joe Neal	71	Regional smoke created by large fire complexes in CA influenced the 8/18–8/21/2020 events in Clark County: Red Salmon Complex, August Complex, LNU Lightning Complex, SCU Lightning Complex, CZU Lightning Complex, Lake Fire, River Fire, Carmel Fire, North Range Fire, and Dome Fire. Other possible fires affecting regional smoke include: Cold Springs Fire, North Complex, Loyalton Fire, and Dolan Fire (all in CA).
08/21/2020	Wildfire	RT	32-003-0043	Paul Meyer	71	Regional smoke created by large fire complexes in CA influenced the 8/18–8/21/2020 events in Clark County: Red Salmon Complex, August Complex, LNU Lightning Complex, SCU Lightning Complex, CZU Lightning Complex, Lake Fire, River Fire, Carmel Fire, North Range Fire, and Dome Fire. Other possible fires affecting regional smoke include: Cold Springs Fire, North Complex, Loyalton Fire, and Dolan Fire (all in CA).
09/02/2020	Wildfire	RT	32-003-0043	Paul Meyer	73	

Date of Event	Type of Event	AQS Flag	Site AQS ID	Site Name	Exceedance Concentration (ppb)	Notes (e.g., event name, links to other events)
		RT	32-003-0071	Walter Johnson	75	Smoke created by the Evans Canyon Fire (WA), White River Fire (OR), and Lionshead Fire (OR) was transported to the Clark County area, resulting in this event. Other fires in CA that are likely to have contributed to this event: Slink Fire, SQF Lightning Complex, Dolan Fire, North Complex, SCU Lightning Complex, August Complex, and Red Salmon Complex.
09/26/2020	Wildfire	RT	32-003-0075	Joe Neal	75	Large fire complexes in CA led to regional smoke affecting Clark County during this event: Red Salmon Complex, August Complex, North Complex, SQF Lightning Complex, Blue Jay/Wolf Fires, Creek Fire, Bobcat Fire, El Dorado Fire, and (possibly) the Slater/Devil Fires.
		RT	32-003-0071	Walter Johnson	71	

B) Violating Sites Information

(Listing of all violating sites in the planning area, regardless of operating agency, and regardless of whether or not they are impacted by EEs.)

Site/monitor (AQS ID and POC)	Design Value (<u>without</u> EPA concurrence on any of the events listed in Table A above) (ppb)	Design Value (<u>with</u> EPA concurrence on all events listed in Table A above) (ppb)
Green Valley (32-003-0298, POC: 1)	72 (2020 preliminary)	70
Joe Neal (32-003-0075, POC: 1)	74 (2020 preliminary)	69
Paul Meyer (32-003-0043, POC: 1)	73 (2020 preliminary)	70
Walter Johnson (32-003-0071, POC: 1)	73 (2020 preliminary)	70

C) Summary of Maximum Design Value (DV) Site Information (Effect of EPA Concurrence on Maximum Design Value Site Determination)

(Two highest values from Table B)

Maximum DV site (AQS ID) **<u>without</u> EPA concurrence** on any of the events listed in table A above	**Design Value**	**Design Value Site**	**Comment**
	74	Joe Neal (32-003-0075, POC: 1)	
Maximum DV site (AQS ID) **<u>with</u> EPA concurrence** on all events listed in table A above	**Design Value**	**Design Value Site**	**Comment**
	70	Green Valley (32-003-0298, POC: 1) Paul Meyer (32-003-0043, POC: 1) Walter Johnson (32-003-0071, POC: 1)	Maximum DV at all 3 sites is same.

D) List of any sites (AQS ID) within planning area with invalid design values (e.g., due to data incompleteness)

The Department of Environment and Sustainability does not anticipate any sites having invalid design values for the 2018–2020 design value period; however, final data for 2020 is still being collected and pending year-end submission.

APPENDIX B

PUBLIC NOTIFICATION

Real-time air quality data, Air Quality Index (AQI) maps, daily air quality forecasts, and event notifications are available on the DES website (https://clarkcountynvairquality.meteostar.com). Air quality forecasts and current data are also available through EPA's AirNow and EnviroFlash systems. DES issues air quality advisories and alerts to warn the public and regulated community if unhealthy levels of a regulated pollutant are anticipated, and to provide recommendations on reducing exposure and emissions. Advisories are issued when forecast conditions are favorable for pollutant levels to exceed the NAAQS, i.e., to reach the Unhealthy for Sensitive Groups (USG) level on the AQI, or when public health and safety might be in danger. Alerts are issued when air quality levels have already reached the AQI USG level or are expected to.

AQI for June 23, 2018

Reporting for June 23, 2018 — June 23 2018 — Select a Different Date

☐ Emulate WWW

Metropolitan Area or Non-Metropolitan County	Air Quality Rating	Critical Pollutant	Air Quality Index															
			Ozone				Carbon Monoxide		Sulfur Dioxide		Nitrogen Dioxide		PM-10 (Std Cond)		PM-2.5 (Lcl Acpt)		PM-2.5 (Lcl Cond)	
			1-Hour		8-Hour		8-Hour		1-Hour		1-Hour		24-Hour		24-Hour		24-Hour	
			AQI	ppb	AQI	ppb	AQI	ppm	AQI	ppb	AQI	ppb	AQI	µg/m³ (25° C)	AQI	µg/m³ LC	AQI	µg/m³ LC
Clark County -- Region 1																		
Apex	Moderate	Ozone	*	68	84	65												
Boulder City	Moderate	Ozone	*	66	74	62							47	50.86				
Greater Las Vegas	Unhealthy for sensitive groups	Ozone	*	89	118	76	4	0.326	1	0.7	42	44.2	34	36.41			38	9.51
Indian Springs	Unhealthy for sensitive groups	Ozone	*	77	108	73												
Jean	Unhealthy for sensitive groups	Ozone	*	80	122	77							20	21.87			20	4.90
Mesquite	Moderate	Ozone	*	65	67	60												

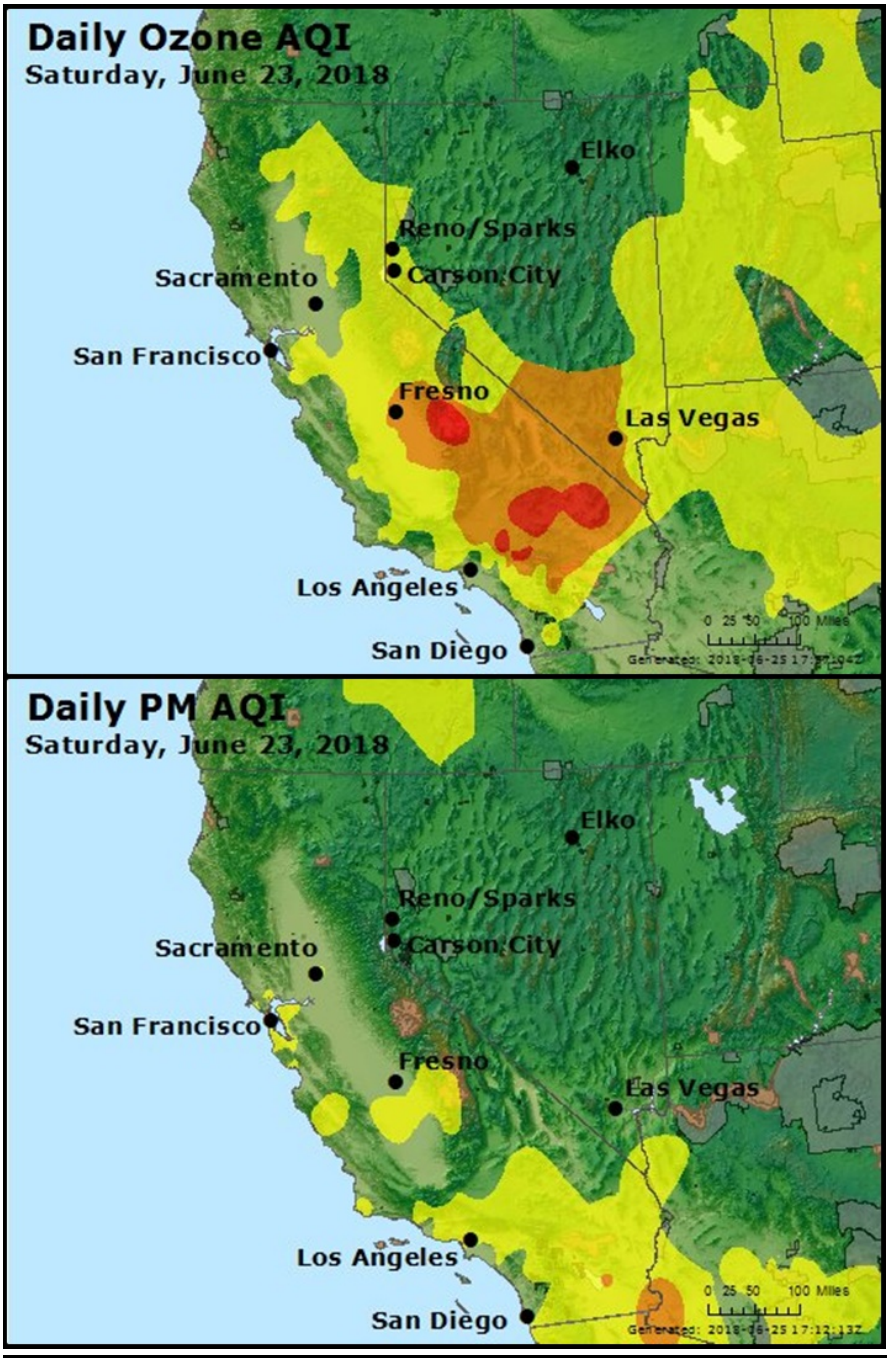
Reporting for June 23, 2018 — June 23 2018 — Select a Different Date

☐ Emulate WWW

Return to Main AQI Report

Monitoring Sites in the Greater Las Vegas Metro Area	Air Quality Rating	Critical Pollutant	Air Quality Index															
			Ozone				Carbon Monoxide		Sulfur Dioxide		Nitrogen Dioxide		PM-10 (Std Cond)		PM-2.5 (Lcl Acpt)		PM-2.5 (Lcl Cond)	
			1-Hour		8-Hour		8-Hour		1-Hour		1-Hour		24-Hour		24-Hour		24-Hour	
			AQI	ppb	AQI	ppb	AQI	ppm	AQI	ppb	AQI	ppb	AQI	µg/m³ (25° C)	AQI	µg/m³ LC	AQI	µg/m³ LC
Clark County	Unhealthy for sensitive groups	Ozone	*	89	118	76	4	0.326	1	0.7	42	44.2	34	36.41			38	9.51
Casino Center	Good	Nitrogen Dioxide									38	40.4						
Green Valley	Unhealthy for sensitive groups	Ozone	*	77	115	75							29	31.43			27	6.59
Jerome Mack	Unhealthy for sensitive groups	Ozone	*	76	104	72			1	0.7	42	44.2					38	9.51
Joe Neal	Unhealthy for sensitive groups	Ozone	*	79	104	72					9	9.6	24	25.51			23	5.62
Palo Verde	Unhealthy for sensitive groups	Ozone	*	76	101	71							18	19.75				
Paul Meyer	Unhealthy for sensitive groups	Ozone	*	77	104	72							27	29.20			24	5.86
Rancho & Teddy	Good	Nitrogen Dioxide					4	0.325			38	40.4					26	6.49
Sunrise Acres	Good	Nitrogen Dioxide					4	0.326			38	40.2	34	36.41			29	7.11
Walter Johnson	Unhealthy for sensitive groups	Ozone	*	89	118	76							22	23.97				

AQI map for June 23, 2018



Air Quality Forecast

AIR QUALITY FORECAST

Air Quality Ozone Advisory Extended Through Saturday, June 23

Forecast

(Updated 6/22/2018)

	Ozone	Carbon Monoxide	Dust/Smoke/Soot
Fri (6/22/2018)	UNH-SG	Good	Good
Sat (6/23/2018)	UNH-SG	Good	Good
Sun (6/24/2018)	Moderate	Good	Good
Mon (6/25/2018)	Moderate	Good	Good
Tue (6/26/2018)	Moderate	Good	Good

From our Meteorologists:

High pressure building back over area resulting in early morning/mid-afternoon light, variable to NE-E winds and afternoon/evening SW winds. By late afternoon on Saturday, next disturbance moves through NE NV resulting in locally breezy SW winds. The result will be an AQ in the USG level for next two days with elevated levels of Ozone before levels drop into the Moderate range on Sunday through the rest of the forecast period. -- You can follow Clark County air quality conditions and updates on Twitter: @CCAirQuality. --

More Detailed Monitoring Information
What is an Air Quality Advisory or Alert?

Other questions or comments?

Paul Fransioli: (702) 455-2656 Paul.Fransioli@ClarkCountyNV.gov

Jose Chaverria: (702) 455-1633 Jose.Chaverria@clarkcountynv.gov

Air Quality Advisory

News Release

Office of Public Communications • (702) 455-3546 • FAX (702) 455-3558 • www.ClarkCountyNV.gov

Contact: Kevin J MacDonald
Public Information Officer

Phone: (702) 455-8131
Mobile: (702) 232-0931
E-mail: kevmac@ClarkCountyNV.gov

For Immediate Release

Friday, June 22, 2018

Air Quality Ozone Advisory Extended Through Saturday, June 23

Clark County's Department of Air Quality (DAQ) has extended its ozone advisory issued for today and Thursday through **Saturday, June 23.** Elevated levels of ozone are expected due to light, easterly winds contributing to the formation of ground-level ozone in the Las Vegas Valley.

Ground-level ozone is a key ingredient of urban smog during the hottest months of the year. A seasonal advisory is in effect in the Las Vegas Valley from April through September when ozone can build up during daytime hours because of strong sunlight, hot temperatures, gasoline and chemical vapors, and pollutants from automobiles, wildfires and regional transport. Exposure to ozone can irritate your respiratory system and cause coughing, a sore throat, chest pain and shortness of breath even in healthy people, according to the U.S. Environmental Protection Agency. People who may be most sensitive to ozone include individuals with lung disease such as asthma, emphysema or chronic bronchitis, older adults, children, and active people who exercise or work vigorously outdoors. Consult your physician if you have a medical condition that makes you sensitive to air pollution.

County Air Quality officials will continue to monitor conditions and if necessary will post updates on the forecast page of the DAQ website at http://redrock.clarkcountynv.gov/forecast/. You can subscribe to free air quality forecasts and advisories via e-mail or text through the EnviroFlash service at www.enviroflash.org. The EPA's Air Quality Index translates air quality data into colors to help people know when they may experience health effects from air pollution. An AQI of 101 or more is considered a level that may be unhealthy for sensitive groups of people. Tips to limit exposure to ozone and reduce its formation at ground level include:

- Reduce the time you are active outdoors when ozone levels are elevated, especially if you are engaged in a strenuous activity or have a respiratory disease.
- Schedule activities for the morning or evening when ozone levels are usually lower.
- Substitute a less intense activity – walk instead of jog, for example.
- Reduce driving – combine errands into one trip.
- Don't idle your car engine unnecessarily.
- Use mass transit or carpool.
- Fill up your gas tank after sunset. Try not to spill gasoline when filling up, and don't top off your tank.
- Keep your car well maintained.
- Consider landscaping that uses less water and gas-powered equipment to maintain.
- Turn off lights and electronics when not in use. Less fuel burned at power plants means cleaner air.

News Release

Clark County is a dynamic and innovative organization dedicated to providing top-quality service with integrity, respect and accountability. With jurisdiction over the world-famous Las Vegas Strip and covering an area the size of New Jersey, Clark is the nation's 14th-largest county and provides extensive regional services to more than 2.2 million citizens and 46.2 million visitors a year. Included are the nation's 8th-busiest airport, air quality compliance, social services and the state's largest public hospital, University Medical Center. The County also provides municipal services that are traditionally provided by cities to about 951,000 residents in the unincorporated area. Those include fire protection, roads and other public works, parks and recreation, and planning and development.

.

Clark County news releases may be found at www.ClarkCountyNV.gov.
You may also follow the County on more than 40 social media sites, including
Facebook, Twitter, Instagram, LinkedIn and **YouTube.**

APPENDIX C

Documentation of Public Comment Process

ITEMS TO BE INSERTED AT A LATER DATE.